REMARKS

At the outset, the courtesies extended by the Examiner in granting the 10 January 2005 interview are appreciatively noted. During the interview, the references cited by the Examiner were discussed in light of clarifying amendments proposed to the Claims by the undersigned Attorney, as reflected herein.

Responsive to the Office Action and the discussions had at the interview, Claims 1, 15, 29, 31, and 34-35 are amended for further prosecution with the other pending Claims. It is believed that with such amendment of Claims, there is a further clarification of the pending Claims' recitations.

In the Office Action, the Examiner rejected Claim 29 under 35 U.S.C. § 102(b) as being anticipated by the Clarke, et al. reference. The Examiner also rejected Claims 1-2, 4-5, 8, 15-16, 18-19, 22, and 34-35 under 35 U.S.C. § 103(a) as being unpatentable or otherwise anticipated by the Liu, et al. reference in view of the Lee reference. In setting forth this latter rejection, the Examiner relied upon Lee for disclosing various protocols for communication systems and concluded that it would have been obvious to one of ordinary skill in the art to have employed the protocols disclosed by Lee in the Liu, et al. device.

The Examiner further rejected Claim 31 under 35 U.S.C. § 103(a) as being unpatentable over the Clarke, et al. reference in view of the Theus, et al. reference. In this regard, the Examiner acknowledged that Clarke, et al. fails to specifically teach a crystal oscillator which supplies a reference frequency in accordance with

a common carrier frequency. The Examiner relied upon Theus, et al. for disclosing this feature, however, and concluded that it would have been obvious to one of ordinary skill in the art to have incorporated the feature in the Clarke, et al. device.

The Examiner additionally rejected Claims 9 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Liu, et al. and Lee, further in view of Theus, et al. The Examiner acknowledged that Liu, et al. fails to specifically teach any means for variably adjusting a reference frequency output of a crystal oscillator in accordance with the output of a locking means. Citing Theus, et al. for teaching a digital adjustable crystal oscillator, the Examiner nonetheless reasoned that it would have been obvious to have incorporated such feature into the Liu, et al. oscillator.

As each of the newly-amended independent Claims 1, 15, and 34-35 now more clearly recites, Applicant's claimed device is one which includes among its combination of features various means for, "in preemptive manner," "adjusting" a common frequency of a signal to be transmitted between communicating first and second transceiver units. In doing so, it substantially reduces the effects of any offset in respective common frequency references used by the respective first and second transceiver units, which would otherwise be perceived and errantly processed by the transceiver unit receiving the transmitted signal. The device as now more clearly recited in these Claims includes among its features means for

"detecting this offset" in a manner "responsive to a continuous comparison of received and detected signals." As a result, the "signal to be transmitted" subsequently by a given transceiver unit is "thereby adjusted to be in substantial frequency lock with the common frequency reference of the ... [other] transceiver unit," as each of the newly-amended independent Claims 1, 15, and 34-35 also now more clearly recites.

The remaining independent Claims 29 and 31 are also amended to each now more clearly recite among its combination of features a frequency lock loop for detecting the carrier frequency offset between first and second transceiver units. These Claims are amended to now more clearly recite, as well, appropriate measures not only for responsively processing the received signal, but also for - "in preemptive manner" - adapting the common frequency at a given transceiver unit's transmit. Accordingly, the offset that would otherwise be perceived by the other transceiver unit will be substantially reduced, thereby enhancing the reliability of "wireless bi-directional communication between the first and second transceiver units," as each of the Claims 29 and 31 now clarifies.

The full combinations of these and other features now more clearly recited by Applicant's Claims is nowhere disclosed by the cited references. Note in this regard that the Clarke, et al. reference which the Examiner cited as the primary reference against Claims 29 and 31 does disclose an elaborate microwave transmitter system equipped with certain means to detect and remove drift or other

error in its carrier frequency. The reference's disclosed approach is one in which the overall transmitter system operates to samples its own transmit signal for any carrier frequency error then applies the correction to itself through a feedback loop. In certain embodiments, the system does employ a separate yet dedicated "monitoring receiver" which receives the transmitted signal for corrective feedback to the actual transmitting antenna. Even so, Clarke, et al., prescribes such monitoring receiver specifically in "forming the sampler of the feed-back loop for sampling the channel signals from the transmission antenna," (Column 3; lines 56-59; *emphasis added*).

The prescribed transmitter system thus operates in this regard much like a front end automatic gain control (AGC) circuit, but to correct for frequency drift. Such "feed-back loop" enabled automatic frequency control departs from the carrier offset correction carried out by Applicant's claimed device - between first and second "transceiver units," to effect "wireless bi-directional communication between … [those] first and second transceiver units" (as Claims 29 and 31 each now clarify).

Turning next to Liu, et al., cited by the Examiner as the primary reference against Claims 1, 15, 34-35 and Claims depending therefrom, the reference admittedly discloses application of an estimated carrier offset at transmit. This reference, however, directs itself to a very particular yet sufficiently precise carrier offset estimation technique, having the notable feature of "reduced computations,"

for effecting such estimated correction "without sacrificing the robustness of spread spectrum communications," (column2, line 1; column 1, lines 60-62). Toward that end, the reference specifically prescribes a carrier offset estimation technique realizable with "reduced computations" (column 2; line 1), whereby a received signal is stripped of its "expected carrier frequency provided by a local digital oscillator" (column 2; lines 26-27), then further evaluated by the carrier offset estimator to obtain a precise estimate of the carrier offset. This streamlined, yet purportedly precise, carrier offset estimation approach precludes Applicant's approach of "detecting responsive to a continuous comparison of received and detected signals," to determine "the offset between respective common frequency levels used by the first and second transceiver units," as each of the newly-amended independent Claims 1, 15, and 34-35 now more clearly recites.

While Liu, et al. recognizes the well-established use of phase locked loop circuits in the prior art for processing down-converted received signals, the reference nowhere even suggests the concurrent use of such for any "preemptive" transmit adjustment purposes. Indeed, Liu et al. emphatically teaches its estimation technique on the presumption that no other technique will work suitably in that case (that, system robustness will be lost otherwise). As such, Liu, et al. teaches actively away from any approach wherein a "signal to be transmitted" by a given transceiver unit is preemptively "adjusted to be in substantial frequency lock with the common frequency reference of ... [another]

transceiver unit," communicating therewith, as each of the newly-amended independent Claims 1, 15, and 34-35 further clarifies.

Given such contrary teachings of the primarily-cited Clarke, et al. and Liu, et al. references, the teachings of the secondarily-cited Lee and Theus, et al. references are found to be quite ineffectual to the present patentability analysis. It is respectfully submitted, therefore, that the cited Clarke, et al., Liu, et al., Lee, and Theus, et al. references, even when considered together, fail to disclose the unique combination of elements now more clearly recited by Applicant's pending Claims for the purposes and objectives disclosed in the subject Patent Application.

It is now believed that the subject Patent Application has been placed fully in condition for allowance, and such action is respectfully requested.

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